

Remarks

Claims 1 to 31 are pending in the application, of which claims 1, 28 and 31 are independent claims. Claims 1, 9, 28 and 31 are amended herein. No Claims are canceled. No new Claims have been added. Reconsideration and further examination are respectfully requested.

No new matter is believed to have been introduced to the application by this amendment. The changes to the claims are fully supported by the original disclosure, including, for example, original paragraph [00045].

Claim Rejections – 35 USC § 103

Claims 1 to 5 and 7 to 31 were rejected under 35 U.S.C. §103(a) over U.S. Pat. Pub. No. 2002/0038392 (“De La Huerga”) and U.S. Pat. No. 7,068,170 (“Green”). Claim 6 was rejected under 35 U.S.C. §103(a) over De La Huerga, Green and U.S. Pat. No. 5,222,946 (“Kamen”). These rejections are hereby traversed and reconsideration and withdrawal thereof are respectfully requested.

Claim 1

Independent Claim 1 relates to an infusion data communication system having a communication link with which relevant administration data may be communicated in a medical fluid administration system, the administration system having a medical fluid container in which is located medical fluid for administration to a patient and a conduit with a lumen through which the medical fluid from the container is conducted to the patient for administration, the administration system having an upstream end at which the container is located and a downstream end at which the patient is located. A first data transmitting device is located at either the upstream end or the downstream end, the first data transmitting device configured to transmit a first radio frequency signal comprising relevant administration data into the medical fluid residing in the lumen of the conduit. A first data reader device is engaged with the conduit at a position between the upstream end and the downstream end, the first data reader device configured to receive from the medical fluid in the lumen the relevant administration data transmitted into the medical fluid by the first data transmitting device.

The Office Action concedes that De La Huerga does not teach the transmission of data into the medical fluid used for infusion into the patient. *See*, Office Action, page 3, lines 3-6. The Office Action cites Green as teaching transmission of RFID tags into a liquid. *See*, Office Action, page 3, lines 7-8. Applicants respectfully submit that the Office Action has improperly combined the De La Huerga and Green references. There is no teaching in the applied references about the suitability of using Green's method of immersing RFID tags in a patient care system. Neither reference teaches or suggests the suitability of immersing RFID tags into an infusate, which could result in the RFID tags being infused into a patient's body. Therefore, one skilled in the art would not combine Green's teaching with De La Huerga's infusion system.

However, without conceding the issue, Applicants have amended Claim 1 to clarify that the claimed first data transmitting device is configured to transmit "a first radio frequency signal comprising relevant administration data into the medical fluid." As described in, e.g., paragraphs [0045] and [0064] of the filed specification, radio frequency signals have been found to be suitable for data communication via a medical fluid. For example, embodiments having 100-300 KHz frequency range and about 100 nanowatts power have been found not to be low enough to cause a muscle reaction in patients and not to be high enough to radiate through tubing and surrounding air. It is respectfully submitted that the applied references fail to teach such an infusion data communication system in which a first radio frequency signal comprising relevant administration data is transmitted into the medical fluid.

Based on the above, amended Claim 1 is believed to be allowable over the applied references. Reconsideration and withdrawal of the rejection of Claim 1 are respectfully requested.

Claims 28 and 31

Claim 28 is directed to an infusion data communication system having a radio frequency communication link with which relevant administration data may be communicated in a medical fluid administration system, the administration system having a medical fluid container in which is located medical fluid for administration to a patient and a conduit with a lumen through which the medical fluid from the container is conducted to the patient for administration, an infusion pump operating on the conduit to move fluid to the patient, the administration system having an upstream end at which the container is located and a downstream end at which the patient is located. A container data transmitting device is located at the medical fluid container, the

container data transmitting device configured to transmit relevant administration data, including patient identification data and medication identification data, into medical fluid residing in the fluid container at a frequency and a power level selected such that the data will remain substantially within the lumen of the conduit. A patient data transmitting device located at the patient, the patient data transmitting device configured to transmit the relevant patient data, including patient identification data, into the medical fluid at a frequency and a power level selected such that the data will remain substantially within the lumen of the conduit. A first data reader device located at the conduit at the infusion pump, the first data reader device configured to receive from the medical fluid in the lumen the relevant administration data transmitted into the medical fluid by the first data transmitting device. A second data reader device located at the infusion pump, the second data reader device configured to receive from the medical fluid in the lumen the relevant patient data transmitted into the medical fluid by the patient data transmitting device. A processor is configured to compare the patient identification data from the relevant administration data to the patient identification data from the relevant patient data and provide an alert if the two patient identification data do not match.

Claim 31 is directed to a method for communicating relevant administration data in a medication administration system, the administration system having a medical fluid container in which is located medical fluid for administration to a patient and a conduit with a lumen through which the medical fluid from the container is conducted to the patient for administration, the administration system having an upstream end at which the container is located and a downstream end at which the patient is located. The method includes transmitting a radio frequency signal comprising relevant administration data at either the upstream end or the downstream end into the medical fluid residing in the lumen of the conduit such that the data is confined to the lumen, and receiving from the medical fluid in the lumen of the conduit at a position between the upstream end and the downstream end the relevant administration data.

Claims 28 and 31 are believed to be allowable over the applied references, at least for the same reasons presented with respect to the “radio frequency signal” feature of Claim 1 discussed above. Reconsideration and withdrawal of the rejections of Claims 28 and 31 are respectfully requested.

The other claims currently under consideration in the application are dependent from their respective independent claims discussed above and therefore are believed to be allowable

over the applied references for at least similar reasons. Because each dependent claim is deemed to define an additional aspect of the invention, the individual consideration of each on its own merits is respectfully requested.

The absence of a reply to a specific rejection, issue, or comment does not signify agreement with or concession of that rejection, issue, or comment. In addition, because the arguments made above may not be exhaustive, there may be other reasons for patentability of any or all claims that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment or cancellation of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment or cancellation.

CONCLUSION

In light of the amendments and remarks above, this application should be considered in condition for allowance and the case passed to issue. Should there be any questions regarding this amendment or the application in general, a telephone call to the undersigned would be appreciated to expedite the prosecution of the application.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 502624 and please credit any excess fees to such deposit account.

Respectfully submitted,
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